

Male smokers less likely to need joint replacement surgery of hip or knee

July 8 2011

Surprising results from a new study revealed that men who smoke had less risk of undergoing total joint replacement surgery than those who never smoked. Researchers also reported that men who were overweight, or who engaged in vigorous physical activity were more likely to need arthroplasty. Details of this study are now available in *Arthritis & Rheumatism*, a journal published by Wiley-Blackwell on behalf of the American College of Rheumatology (ACR).

Research has shown that total hip and knee replacements, also known as arthroplasty, are among the most common elective surgeries performed in developed countries. According to data from the 2007 National Hospital Discharge Survey an estimated 230,000 Americans had hip replacement surgery and 543,000 received knee replacements, with severe osteoarthritis (OA) cited as the most frequent cause for undergoing the procedure. OA—the most common form of [arthritis](#)—causes pain and stiffness in the joints, with studies indicating that older age, female gender, and obesity increase disease risk.

In the current study, George Mnatzaganian, a PhD student from the University of Adelaide in Australia, and colleagues examined the associations of [smoking](#), body mass index (BMI), and physical activity as they relate to risk of joint replacement surgery in men. Clinical data for the 11,388 male study participants, who were part of the Health in Men Study (HIMS), were integrated with hospital morbidity data and mortality records. During the initial health screening (1996-1999), HIMS subjects were surveyed regarding smoking history and physical activity.

Researchers analyzed clinical data from baseline through March 2007, identifying 857 men who had joint replacement surgery following the screening. Of those having surgery, 59% had total knee replacement and 41% had total hip replacement. Subjects were categorized into three age groups: 65-69 years, 70-74 years, and 75 or more years of age.

Analysis showed that being overweight independently increased total joint replacement risk, while smoking lowered the risk, which was most evident after 23 years of smoking exposure. In fact, men who smoked 48 years or more were up to 51% less likely to undergo total joint replacements than those who never smoked. The team also reported that vigorous exercise increased risk of joint replacement in men in the 70-74 year age group.

"Our study is the first to demonstrate a strong inverse correlation between smoking duration and risk of total joint replacement. The independent inverse associations of smoking with risk of total [joint replacement](#) were evident also after adjusting for major confounders and after accounting for the competing mortality risk in this elderly cohort of men," Mnatzaganian confirmed. "Further investigation is needed to determine how smoking impacts the development of OA."

Provided by Wiley

Citation: Male smokers less likely to need joint replacement surgery of hip or knee (2011, July 8) retrieved 4 May 2024 from

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